DOCTOR OF OPTOMETRY PROGRAM HANDBOOK

QASSIM UNIVERSITY
College of Applied Medical Sciences
Doctor of Optometry Program

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1. College of Applied Medical Sciences

1.1. Introduction

The College of Applied Medical Sciences was established, with the grace of God Almighty, based on the high approval issued by the Custodian of the Two Holy Mosques, Prime Minister and President of the Higher Education Council, King Abdullah bin Abdulaziz, may Allah have mercy on him, No. 12/35/1426 and dated 1/18/1426 A.H. This was based on the decision of the Higher Education Council for restructuring the university and including the transfer of the Department of Medical Microbiology in the College of Sciences to the College of Applied Medical Sciences.

This historic decision has had an effective impact on covering the multiple and increasing needs in the health field and keep pace with the structural and technical development in this vital and important field.

The college includes the following departments that have been approved by the Higher Education Council under the number 12/35/1426:

1. Department of Medical Laboratories (The department was activated in 1427/1428 AH
2. Department of Optometry (The department was activated in 1428/1429 AH)
3. Department of Radiological Techniques (The department was activated in 1431/1432 AH)
4. Department of Medical Devices Technology (not enabled)
5. Department of Medical Rehabilitation (not enabled)
6. Department of Clinical Nutrition (not enabled)
7. Department of Human Health

The royal approval was also issued by the Custodian of the Two Holy Mosques, Prime Minister and Chairman of the Higher Education Council, King Abdullah bin Abdulaziz, may God have mercy on him (Resolution No. 15/68/1433) establishing the following departments:

8. Department of Biomedical Technology (services department)
9. Department of Basic Health Sciences (services department).

The Kingdom of Saudi Arabia is currently witnessing an increasing growth and expansion in the field of health and medical services, as well as a great development in the field of diagnosis and treatment of diseases. Accordingly, the Kingdom has witnessed a significant increase in the number of medical centers resulting in an urgent need for qualified people capable of covering the needs of all this expansion and development. It became necessary to prepare and qualify more health cadres to work within the medical team that provides integrated health care. The state, may God preserve it under its wise leadership, has made all efforts to qualify and prepare health cadres by paying attention to the university medical education. The results of this interest have become evident with the approval of the establishment of many medical colleges in various Saudi universities.

The College of Applied Medical Sciences at Qassim University strives to be one of the leading and distinguished colleges to cover the Kingdom's needs with the best and most distinguished cadres in Applied Medical Sciences.

1.2. College Vision

Academic excellence nationally in the fields of Applied Medical Sciences and strengthen medical care services.

1.3. College Mission

Providing qualified graduates in the fields of Applied Medical Sciences and making contributions to research and professional and upscale consultancy, in a stimulating work environment, thus contributing to the development of medical care services, and solving health problems locally and nationally.

1.4. College Objectives

- Raising the quality of education in all disciplines to achieve excellence by providing academic programs recognized by local and international accrediting organizations in the same specialty.
- Raising the merit and competitiveness of students.
- Improving the effectiveness of community services and applied research to meet the requirements of development.
- Raising the administrative and informational technical performance.
- Enhancing cooperation and partnership with various local, national and international institutions.

1.5. College Values

- Justice: The College seeks to achieve the elements of justice, equal opportunities and fairness in dealing with all.
- Honesty: Performing work with sincerity and commitment to professional ethics.
- Transparency: disclosure of transactions and procedures, and support for accountability and integrity requirements.
- Quality: Applying the highest quality standards in all aspects to distinguish the outputs and services.

- Creativity: Creating an organizational climate that stimulates creative thinking and innovative behavior.
- Teamwork: Establishing a culture of teamwork in thinking and behavior.
- Scientific Freedom: Encouraging exploratory scientific practices, openness and interaction with others.

1.6. College Admission Requirements

1) Passing the preparatory year (health track).
2) Passing the personal interview and medical examination.
3) Availability of a seat.

1.7. Scientific Departments

1) Department of Medical Laboratories.
2) Department of optometry.
3) Department of Radiological Technology.
4) Department of Human Health.
5) Department of Medical Biotechnology
6) Department of Basic Health Sciences

2. Doctor of Optometry Program

2.1. Information Regarding the Department of Optometry

The Department of Optometry, within the College of Applied Medical Sciences, at Qassim University, provides The Doctor of Optometry (O.D.) program which launched in the academic year 2008/2009. The O.D. degree is given in a number of universities around the world and has been considered as the only key to the practice of optometry in North America. The O.D. degree is classified by various U.S.A bodies and organizations such as the American Optometry Association (A.O.A.), as well as Association of Regulatory Boards of Optometry (ARBO). The O.D. degree has been rated from the Saudi Commission for Health Specialties (SCFHS), Decision No. 3 / 20264, date 10/11/2009 A.H. The holder of O.D. degree is classified to the category of Senior Optometrist. The graduate of the O.D. program, with the acquired skills of the scientific and practical and clinical, through the course which they learned, can provide necessary medical care in the area of the eye and vision in independent comprehensive methods, and contribute actively to innovation and research of developing of Optometry and Vision Science.

2.2. Introduction to the Department of Optometry

The Department of Optometry strives to pursue the most progressive, rigorous, clinical and didactic standards for its optometric students. The O.D. program offered by the Department of Optometry is committed to the advancement of knowledge through leading edge research and the translation of these values in a productive manner to better serve communities and patients in the Kingdom of Saudi Arabia, through the pursuit and implementation of a high-quality optometric training program.

2.3. Department Vision

Aspires to become a nationally distinct program in optometry and vision science, and supportive to the global efforts to overcome blindness, and the dissemination of health awareness in the community.

2.4. Department Mission

O.D. program is seeking to add an important value to the kingdom of Saudi Arabia and the world through excellent and effective study plans, research and service in Optometry and Vision Sciences and the programs of eye care.

2.5. Degree Awarded by the Department

B.Sc in Optometry (Doctor of Optometry)

2.6. Goals of the Department of Optometry

- To significantly improve the quality of the program in optometry in relation to international standards.
- To review the details of the program in relation to changing national needs in vision care.
- To improve the level of faculty support for student learning
- To introduce and extend mechanisms for conducting training and improving skills.

2.7. Learning Outcomes of the Department of Optometry

2.7.1. Knowledge and Understanding

- K1: Describe the anatomy and physiology of the basic organ system, the cellular, the molecular and genetic basis of the development, with special

emphasis on the ocular and visual system, and their relationship to the body as a whole.

- K2: Define the structure and process contributing to the development of refractive error and other optical and perceptual abnormalities of the visual system.
- K3: Recognize the various causes that lead to the development of dysfunction and diseases for major organ systems with special emphasis on the ocular and visual system.
- K4: Describe the optics of the eye and ophthalmic lens system (including spectacles, contact lenses and low vision devices) used to correct refractive, oculomotor and other vision disorders.
- K5: Discuss the mechanism of action of the various classes of pharmaceutical agents, their interaction and their safe and effective use for the treatment of diseases and conditions affecting the eye and visual system.
- K6: Identify the concept, principle, and procedure of vision therapy and other rehabilitative methods used for the management of common visual disorders with respect of the psychological dynamic of doctor and patient relationship, social, psychological and economic forces affecting the diverse patient population.

2.7.2. Skills

- S1: Diagnose, triage, manage and treat common visual conditions including or resulting from: - Refractive error - Abnormalities of accommodation, monocular or binocular vision skills, oculomotor and sensory perceptual

dysfunctions - Ocular diseases and trauma. - Pre and post ocular surgery and laser intervention - Systemic disease. - Environmental or occupational conditions.

- S2: Order and interpret the frequently needed laboratory and diagnostic procedures.
- S3: Assess the patient's visual and physical status and interpret the data to diagnose, formulate and execute an effective management plan.
- S4: Recognize life-threatening and sight-threatening conditions to initiate immediate intervention.
- S5: Prescribe and use ophthalmic material, contact lenses, vision therapy, low vision devices, pharmaceuticals, and certain ophthalmic procedures to treat and manage vision disorders and diseases.
- S6: Use effective communication skills both written and oral as appropriate for maximizing successful patient care outcomes.

2.7.3. Values, Autonomy, and Responsibility

- **V1: Autonomy and Responsibility**

  1. Commitment to work as an integral member of the large interprofessional health care team to improve patient care outcomes.
  2. Responsible for ongoing self-learning and for remaining current and competent in their knowledge and skills.
  3. Manage every relevant condition in a manner that assures safe and effective care for the patient. Manage the practice in a manner that is appropriate

within the healthcare delivery system and according to the code of ethics for optometry.

- **V2: Practice:**

1. Integrate current knowledge, scientific advances and human /social dimensions of patient care to assure the highest quality of patient care by using critical thinking skills.
2. Acquire, analyze and apply latest available information to detect, diagnose and manage ocular diseases.
3. Apply the current knowledge of the subject to prescribe the ophthalmic lenses, contact lenses and pharmacological drugs and use vision therapy that would best suits the patient needs. Utilize all resources in securing the best possible care for their patients.

2.7.4. Graduates Attributes

1. **To have knowledge and information:**
    - Possessing knowledge, concepts and theories in health medical sciences, basic sciences, vision sciences and clinical optometry.
    - The ability to analyze, interpret and apply information related to eye care that is consistent with the needs of the patient and the community.
    - The ability to develop, evaluate, and apply new knowledge and treatment strategies acquired through Innovative scientific research.
2. **Possessing the cognitive and professional skills related to the specialization:**

- Possessing the necessary cognitive and technical skills to protect, diagnose, treat and manage clinical cases that involve Scope of professional responsibilities.
- The ability to communicate effectively and build relationships with professional colleagues, patients, and health care professionals.
- The ability to innovate and design scientific research and use critical thinking skills to deal with differential diagnosis and develop a clinical treatment plan.

3. **Possessing the competencies related to specialization:**
    - The ability to assume leadership responsibility and make decisions in developing the optometry profession in the clinical and research fields.
    - Ability to work as an active member of the professional health care team to improve patient care outcomes.
    - Commitment to continuing education in knowledge, skills, and awareness of professional ethics and the challenges facing the optometry profession in healthcare delivery systems.

2.8. Admission Requirements for Optometry

1. Meet the requirements of CAMS admission.
2. Pass medical fitness.
3. Provide a seat inclusive.

2.9. Graduations Requirements for the Department of Optometry program

1. Successfully pass the preparatory year.
2. Pass successfully the prescribed modules.
3. Pass successfully the internship (one year).

2.10. Career opportunities for graduates the Department of Optometry program

Optometrists practice in different kinds of situations and with different types of employers.

1) Individual Private Practice: The individual private practitioner usually is a primary care optometrist with a stand-alone practice. Practitioners may specialize in fields such as: Contact lenses, Pediatrics, Low vision/geriatrics, and Vision therapy. An individual practice may be in a variety of settings and locations, ranging from a freestanding to a professional building.
2) Partnership or Group Practice: This mode of practice is very similar to an individual practice except that there are two or more optometrists in the group. Each member of the group may specialize in a different area of practice. This is an increasingly popular form of practice.
3) Retail/Optical Settings: In this setting, optometrists usually rent space from or are employed by a large retail outlet. However, they remain independent practitioners.
4) Optometric/Ophthalmologic Professional Settings: The optometrist practices in conjunction with the ophthalmologist and communicates with the patients in this setting.
5) Military/Public Health Optometrists are commissioned officers who work in a hospital or clinical setting with other health care practitioners.
6) Interdisciplinary Care The optometrist works with other health care practitioners in a hospital-based or clinic setting, such as in a Department of Veterans Affairs (V.A.) hospital, as part of an interdisciplinary team.

7) Academic/Research the O.D. teaches about primary care and/or performs research in a university setting. Academics pursue additional training after optometry school and have completed a residency, or a Master of Science or doctoral program.

8) Corporate/Industrial Optometrists are employed by large corporations to perform clinical research or to provide patient care in a clinic within the corporate setting.

9) Consultants Optometrists work as consultants to the ophthalmic industry, education, sport organizations and government.

3. General structure of the study plan of the Doctor of Optometry program

3.1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	6	12	5.9
	Elective	-	-	-
College Requirements	Required	14	31	15.3
	Elective	2	5	2.5
Program Requirements	Required	33	87	43.1
	Elective	5	13	6.4
Capstone Course/Project		4	12	5.9
Field Training/ Internship		3	38	18.8
Residency year		-	-	-
Others		2	4	2
Total		69	202	100

3.2. Program Courses

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 1	ENG0 011	Preparatory English (1)	Required		-	College
	STAT 100	Statistics	Required		2	College
	PHYS110	Physics (1)	Required		2	College
	CSC1 05	Computer Skills	Required		4	College
	PSYC H101	Thinking Skills and Learning Styles	Required		2	College
	Total				10	
Level 2	ENG0 012	Preparatory English (2)	Required	ENG0 011	-	College
	ESP101	English for Health Profession	Required	ENG0 011	2	College
	BHS1 11	Human Biology	Required		4	College
	MDL111	Introduction to Biochemistry	Required		3	College
	PHS115	Ethics of Health Professions	Required		2	College
	MEDU1 11	Health Profession Education and Communication Skills	Required		2	College
	Total				13	
Level 3	IC 101	Introduction to Islamic culture	Required		2	Institution
	HLTH 225	Chemistry for Health Science	Required	MDL 111	2	Program
	ANAT21 2	Principles of Anatomy	Required	BHS 111	3	College
	PHSL21 5	Principles of Physiology	Required	BHS 111	3	College

	MDL242	Principles of Medical Genetics	College Elective G1	MDL 111 BHS 111	3	College
	MDL243	Genetics &Molecular Biology				
	OPTM241	Geometric Optics	Required	PHYS 110	3	Program
		Free Course	Required		2	Free course
	Total				18	
Level 4	IC 102	Islam & Community Building	Required	IC 101	2	Institution
	ARAB101	Language Skills	Required	-	2	Institution
	HLTH222	Emergency Health Care	Required	PHSL 215	2	College
	OPTM231	Ocular Anatomy and Physiology	Required	ANAT 212 PHSL 215	4	Program
	OPTM251	Neuroscience	Required	ANAT 212 PHSL 215	2	Program
	OPTM232	Introduction to Optometry	Required	OPTM 231	2	Program
	OPTM242	Physical Optics	Required	OPTM 241	2	Program
	PSYCH225	Introduction to Psycholog	Required		2	Program
	Total				18	
	IC 103	Economy system in Islam	Required	IC 101	2	institution
Level 5	ARAB 103	Arabic Writing	Required	MDL230	2	institution
	MDL 352	General Pathology	Required	ANAT 212 PHSL 215	3	Program
	OPTM 332	Ocular Biochemistry	Required	CHEM225	2	Program
	OPTM 342	Visual Optics	Required	OPTM 242	2	Program
	OPTM 352	Vision Science 1	Required	OPTM 251	2	Program

	OPTM 361	Optometry (1)	Required	OPTM 231	4	Program
		Free Course	Required		2	Free course
					19	
Level 6	IC 104	The Foundation of Political System in Islam	Required	101 IC	2	institution
	PHG 333	General Pharmacology	Required	-	2	Program
	OPTM 344	Ophthalmic Optics and Dispensing	Required	OPTM 342	3	Program
	OPTM 353	Vision Science (2)	Required	OPTM 352	2	Program
	OPTM 362	Optometry (2)	Required	OPTM 361	4	Program
	OPTM 371	Ocular Disease (1)	Required	MDL 352	3	Program
	OPTM 381	Clinical Procedures (1)	Required	OPTM 361	3	Program
					19	
Level 7	HLTH 421	Biostatistics	Required	STAT 100	2	HLTH 421
	OPTM 454	Binocular Vision	Required	OPTM 353	2	OPTM 454
	OPTM 463	Optometry (3)	Required	OPTM 362	4	OPTM 463
	OPTM 472	Ocular Pharmacology(1)	Required	PHG 333	2	OPTM 472
	OPTM 473	Ocular Disease (2)	Required	OPTM 371	3	OPTM 473
	OPTM 482	Clinical Procedures (2)	Required	OPTM 381	3	OPTM 482
	OPTM 491	Cornea and Contact Lens (1)	Required	OPTM 362	3	OPTM 491
					19	
Level 8	OPTM 464	Pediatric Optometry	Required	OPTM 454	3	Program
	OPTM 474	Ocular Pharmacology(2)	Required	OPTM 472	2	Program
	OPTM 475	Eye and Systemic Disease	Program Elective G1	MDL 352	2	Program
	OPTM 476	Ocular Disorders &Diseases				

	OPTM 477	Ocular Disease (3)	Required	OPTM 473	3	Program
	OPTM 483	Clinical Screening	Program Elective G2	OPTM 482	4	Program
	OPTM 484	Community Eye Health				
	OPTM 492	Cornea and Contact Lens (2)	Required	OPTM 491	3	Program
	OPTM 493	Low Vision Rehabilitation	Required	OPTM 482	3	Program
					20	
Level 9	HLTH 426	Research Methodology	College Elective G2	Passed 90 H	2	College
	HLTH 427	Design of Experiments				
	OPTM 445	Advanced dispensing	Required	OPTM 344	2	Program
	OPTM 465	Integrated Optometry	Required	OPTM 463	2	Program
	OPTM 466	Occupational and Environmental Optometry	Required	OPTM 463	3	Program
	OPTM478	Optometric Epidemiology & Public Health	Program Elective G3	-	3	Program
	OPTM 479	Optometric Profession				
	OPTM 488	Optometry Clinic (1)	Required	OPTM 477	4	Program
	OPTM 494	Specialty Contact Lens	Required	OPTM 492	3	Program
					19	
Level 10	OPTM 467	Optometry Practice Management	Program Elective G4	OPTM 466	2	Program
	OPTM 468	Business Aspect of Optometry				
	OPTM485	Applied Ocular Therapeutics	Required	OPTM465	2	Program
	OPTM 489	Optometry Clinic (2)	Required	OPTM 488	4	Program

	OPTM 486	Optometric Case Analysis	Program Elective G5	OPTM 477	2	Program
	OPTM 487	Evidence Based Optometry				
	OPTM 495	Advanced Topics in Optometry	Required	OPTM 465	3	Program
	OPTM 469	Graduation Research Project	Required	HLTH426	4	Program
					17	
Level 10	OPTM 496	First 6 months of internship	Required	Passed 172	**15**	Program
Level 11	OPTM 496	Last 6 months of internship	Required	Passed 172	**15**	Program

4. Internship

4.1. Introduction

The fifth year of the Doctor of Optometry (O.D.) program at College of Applied Medical Sciences, of Qassim University is devoted entirely to the clinical education track and consists of a three clinical rotation system that requires student optometrists to participate in external clinical site training with an option to choose a clinical rotation. This experience provides students with a wide range of patient care opportunities. Each student is required to complete three internship rotations of 4 months each. Between the rotations, experiences in Low Vision, Contact Lenses, and Pediatrics will be obtained. Each rotation will contain a primary care component.

The coordination and educational experience of the internal clinical education program is managed by the Chairman for the Department, the Dean of Student and Academic Affairs, in addition to the internal site supervisors at each location.

4.2. Objectives

1) To educate students to a level from which they can successfully undertake careers in optometric practice. This goal will be achieved through the following objectives:
    - Train students within a diverse patient base which includes experience in each of the clinical services.
    - Provide each student with the opportunity to learn and become proficient in entry level optometric knowledge and skills.
    - Encourage students to engage in active clinical decision-making using evidence-based knowledge. Exposure to clinical decision-making support tools should be promoted.

- Stimulate the student by the presence and use of scientific knowledge to foster a sense of critical inquiry and understanding of the importance of research and the ability to discern the hierarchy of various research methods.
- Expose students to practice management activities within various health care settings.

2) To foster in our students those desirable ethical qualities and professional attitudes essential for the practice of optometry. This goal will be achieved through the following objectives:
    - Foster the personal and professional development of the student and consider the student as a maturing colleague with appropriate responsibilities.
    - Help the student to appreciate and understand the central importance of the doctor-patient relationship and effective communication skills in all relationships.
    - Educate the student regarding the responsibilities and privileges of the optometric profession and the individual practitioner, as well as the rights of individual patients.
    - Help the student to appreciate and understand the ethical, social, regulatory, and economic factors affecting patients and the profession.
    - Instill in the student the importance of teamwork and effective communication among those committed to the improvement of ocular, systemic, and public health.

- Educate the student concerning optometry's role in the health care arena in ameliorating ocular and systemic disease in their community.

3) To assist the student to acquire the skills and dedication for lifelong learning in order to maintain professional excellence. This goal will be achieved through the following objective:
    - Develop student skills in critical thinking and problem solving through increased use of independent and interactive learning experiences with an emphasis on evidenced-based sources of information.
4) To provide innovative and engaging educational programs that meet the evolving needs of our students and the public.
    - Each student will participate in a variety of health care settings where the student is exposed to a diverse population of entry level patients.
    - Each student will participate in sites that provide experience in secondary/tertiary care.

4.3. Learning Outcomes (Internship)

4.3.1. General Learning Outcomes

1) Demonstrate knowledge and accurately perform the skills required for the diagnosis, triage, management and /or treatment of common visual conditions and ocular diseases, including or resulting from:
    - Refractive anomalies.
    - Abnormalities of accommodation.
    - Abnormalities of monocular or binocular vision skills.
    - Oculomotor and visual sensory/perceptual dysfunctions.

- Ocular disease and trauma.
- Prior ocular surgery and /or laser intervention.
- Systemic disease.
- Environmental or occupational conditions.

2) Demonstrate critical thinking skills by relating patient history and examination data to arrive at an appropriate assessment.
3) Determine an appropriate and effective management plan for the patient based upon the assessment.
4) Demonstrate the ability to prescribe and/or use ophthalmic materials, contact lenses, vision therapy, low vision systems, pharmaceuticals and non-invasive procedures to treat and manage common vision disorders and diseases.
5) Recognize the need for and initiate the coordination of care, including referral, for patients requiring specialty care.
6) Demonstrate effective communication skills, both written and oral, with faculty, staff, and patients.
7) Actively participate in grand rounds, record review, case presentations.
8) Demonstrate ability to realistically self-assess competencies and limitations.
9) Demonstrate the ability to access resources, including the use of information technology, and apply that information in making decisions about individual patient care and health care delivery.
10) Demonstrate a professional ethic of honesty and integrity in all interactions with patients, colleagues, and others.

11) Exhibit awareness of ocular and systemic issues that can be influenced by proper screening and education for particular at-risk patient populations.

4.3.2. Primary Care Service - Clinical Learning Outcomes

- Demonstrate all the skills and knowledge required for the diagnosis, triage, management and /or treatment of common visual conditions and ocular diseases.
- Obtain a detailed and accurate ocular, medical and pharmaceutical history. Includes an evaluation of occupational, avocational, recreational, sport vision and eye-health needs.
- Efficiently perform an evaluation and measurement of visual acuity utilizing such tests Snellen, Broken wheel, pinhole, Bailie Lovie and contrast sensitivity.
- Accurately perform and evaluate color vision dysfunction with T.M.C./Ishihara plates and regular and desaturated D-15 color vision tests.
- Accurately perform refractive procedures and analyze refractive status.
- Accurately perform, interpret and determine a prescription for refractive status (i.e., auto, binocular, cycloplegic and trial frame refractions).
- Accurately perform and interpret tests of corneal curvature and/or topography.
- Accurately perform binocular vision/accommodation procedures (for procedures, refer to primary care exam proficiency forms and Al-Baha University Clinical Practice Guidelines) and analyze binocular vision/accommodation status.
- Accurately perform procedures for the diagnosis of accommodative dysfunction by measuring lag, facility, amplitude, and fatigability with Nott, Bell or M.E.M. retinoscopy, push up amplitude, lens or near/far facility of accommodation.

- Determine appropriate tentative add for presbyopia by utilizing age, cross cylinder or plus lens to blur tests.
- Accurately perform procedures for the diagnosis of non-strabismic and strabismic oculomotor alignment (i.e., cover test, Hirschberg, Bruckner).
- Accurately perform procedures for assessment of comitant and non-concomitant eye alignment (i.e., cover test, Maddox rod, Hess Lancaster, Parks, A.V. pattern assessment, Fielding out procedures). Understand and perform cranial nerve screening when appropriate.
- Perform an evaluation and analysis of nystagmus as to type, magnitude, frequency, direction and null point.
- Accurately evaluate and assess duction/version/vergence functions; saccades (i.e., D.E.M.), fixation (Grid ophthalmoscope and Haidinger Brush), pursuits, fusional vergence with Risley and bar prisms, vergence facility.
- Accurately evaluate and assess sensory fusion status and diagnosis of suppression. Determine frequency, area, intensity and laterality of suppression. Determine correspondence (i.e., Cover test, von Graphe or maddox rod, Herring Bielchowsky) and level of stereopsis (i.e., Titmus fly, Random dot E).
- Accurately perform health assessment procedures (for procedures, refer to primary care exam proficiency forms and Al-Baha University Clinical Practice Guidelines) and identify health abnormalities.
- Efficiently perform anterior segment biomicroscopy within limits of patient comfort to determine normal state from abnormal state of the human ocular anatomy.

- Perform eyelid procedures for the diagnosis and treatment of eyelid disorders including but not limited to entropion, ectropion, blepharitis, trichiasis, distichiasis, ptosis and foreign bodies.
- Manage emergent and urgent ocular conditions with ordering and interpreting smears and cultures when indicated.
- Accurately perform anterior segment procedures for the diagnosis and treatment of ocular surface disease including but not limited to vital dye evaluation, secretory and excretory lacrimal system evaluation, and punctual occlusion.
- Demonstrate proper collagen implant insertion and removal procedures. Anesthetize each punctum. Efficiently manipulate the implant prior to insertion without contaminating the implant. Instruct the patient regarding eye fixation. Properly insert the implant while viewing with appropriate magnification into the lower punctum without contaminating the implant. Appropriately move collagen implant into canaliculus.
- Perform and utilize various illumination techniques of biomicroscopy for the diagnosis of disorders of the cornea, iris, and anterior chamber, including but not limited to corneal infiltrations, iris atrophy, and corneal scars.
- Appropriately utilize diagnostic pharmaceutical agents for the examination of the eye and adnexa and therapeutic pharmaceutical agents for treatment of ocular conditions.
- Accurately perform a crystalline lens evaluation for the diagnosis of lenticular abnormalities, including but not limited to cataract and glaucoma.

- Accurately perform a vitreous evaluation for the diagnosis of vitreal disorders, including but not limited to posterior and anterior vitreous detachment, vitreous collapse, syneresis and liquefaction.
- Efficiently perform a fundus evaluation utilizing a binocular indirect ophthalmoscope within limits of patient comfort. Obtain a clear image of the retinal periphery filling the condensing lens. Perform a systemic and complete examination of the fundus periphery. Obtain a clear retinal image of the posterior pole, filling the condensing lens. Accurately represent disorders on fundus drawings.
- Perform a posterior pole, vitreous, and optic nerve head evaluation within limits of patient comfort, including but not limited to optic nerve evaluation, macular evaluation and equatorial retinal evaluation with a non-contact fundus lens. Position lens properly (alignment, centration, and distance). Accurately describe the vitreous, macular, optic nerve head topography and color, C/D ratio and blood vessels.
- Accurately perform a gonioscopy procedure. Prepare, clean, position and insert gonio lens in a safe and efficient manner. Obtain and sustain a clear view. Perform a systematic examination of all 4 quadrants and identify the most posterior visible angle structure in all quadrants. Remove the gonio lens in a safe and efficient manner.
- Perform and utilize direct ophthalmoscopy where appropriate.
- Accurately evaluate systemic vascular status, including but not limited to: sphygmomanometry, pulse measurement, auscultation, or ophthalmoscopy.

- Accurately perform measurement of intraocular pressure and diurnal I.O.P. (i.e., Goldmann and Tonopen).
- Accurately perform and interpret the field of vision (Screening and threshold fields).
- Arrive at tentative assessment by relating patient history and examination data.
- Arrive at tentative plan for the patient based upon the history and examination data.
- Determine a design, prescription and management advice for spectacles for the correction of refractive error, presbyopia and binocular vision anomalies.
- Properly evaluate pre-surgical cataract, refractive, lid, and retinal disorders following appropriate referral or co-management protocol.
- Properly evaluate and diagnose common disorders of accommodation and binocular vision utilizing refractive and or prismatic spectacle corrections and follow referral or co- management protocol for vision therapy.
- Understand ethical clinical and legal dilemmas of co-management.
- Understand when it is appropriate to order or recommend the following procedures: chest-X rays, C.T., M.R.I., ocular fluorescein angiography, blood chemistry and hematologic laboratory tests. Recognize and initiate the coordination of care for patients requiring advanced medical or specialty care.
- Demonstrate an improving ability to communicate with faculty, staff, and patients. Includes providing patient education and health advice concerning management of the patient's vision and eye health conditions. Demonstrate effective and professional letter writing skills so as to assure successful patient outcomes.
- Understand expected normal and abnormal values of all tests and procedures.

- Demonstrate the ability to access knowledge, including the use of information technology, and apply that information in making decisions about patient care and health care delivery.
- Accurately record data and observations. Assure records meet Al-Baha University Quality Assurance standards, dated, reviewed and signed by intern supervising faculty.
- Complete examination, including dilated fundus examination, within 60 minutes. Maintain performance outcome levels of Clinic Entrance Proficiency Examination, Ocular Disease Proficiencies and Strabismus/Vision Therapy Proficiencies.
- Provide care under the supervision of a faculty optometrist for a total of 175 primary care examinations.

4.3.3. Contact Lens - Clinical Learning Outcomes

Each intern will be able to accomplish the following, where appropriate, on a contact lens patient:

- Obtain and record pertinent information regarding the patient's past and current CL wear regimen. (Materials, solutions, wearing time, replacement schedule, visual performance).
- Obtain and record CL related social history in order to understand the patient's occupational and/or recreational visual demands, the patient's desire for visual performance, comfort, and convenience.
- Review medical and ocular history to ascertain if there are any limitations or risks associated with CL wear.
- Be able to verify CL parameters of unknown lenses

- Soft – approximate power, O.A.D., material condition, manufacturer's marking (know how to interpret markings)
- R.G.P. – precise power, O.A.D., BC, O.Z.D., color, C.T., edge quality, surface quality.

- Efficiently conduct appropriate assessment of habitual CL visual performance
  - V.A. with over-refraction at distance and near (when appropriate)
  - B.V. when appropriate
- Be able to assess the physiologic fit of C.L.s on the patient's eye
  - Soft – centration, movement, surface, rotation (torics)
  - R.G.P. – Lid attachment or intrapalpebral, Fluorescein pooling, edge lift, movement, surface quality
- Assess the ocular health for all CL patients especially considering common CL induced complications and ocular conditions that decrease CL performance. (Assumes students will know the common complications of different classes of CL designs.) i.e., Blepharitis, G.P.C., tear production / quality, conjunctival inflammation, epithelial integrity, stromal edema, endothelial integrity.
- Know how to use CL fitting resources to determine availability and appropriateness of materials and solutions for the individual patient, (such as Tyler's quarterly, CL Spectrum Solutions Guide, Company written and internet materials).
- Be able to evaluate the patient's needs and CL options and logically determine a limited number of viable CL options to be used for trial fitting for the correction of myopia, hyperopia, astigmatism (including mild irregularity), and presbyopia.

- Determine and record a clear plan regarding trial wear period and final CL R regimen. Considering adaptation and wear schedule, replacement schedule, solutions, and reappointment schedule.
- Be able to insert and remove soft and R.G.P. CLs for a patient.
- Be able to instruct the patient on insertion and removal and lens care procedures.
- Be aware of procedures for insertion, removal and care of scleral and prosthetic ocular devices.
- Be aware of:
    - Use of topographer for R.G.P. design
    - Specialty CL fitting
        - ✓ Prosthetics (artificial pupils, cosmetic designs)
        - ✓ Keratoconus fitting
        - ✓ Post-surgical fitting

4.3.4. Vision Rehabilitation - Clinical Learning Outcomes

Each intern will be able to accomplish the following, where appropriate, on a patient with visual impairment:

- Demonstrate clinical knowledge of entry-level vision rehabilitation services.
- Describe exposure to secondary care vision rehabilitation services.
- Discuss vision rehabilitation devices available.
- Demonstrate responsibilities of care and communication when a patient is referred.
- Communicate exam results with other healthcare providers and organizations.
- Describe the patient's functional visual concerns.
- Perform tests to evaluate the patient's functional vision.

- Discuss magnification principles.
- Demonstrating and explain magnifying devices to patients.
- Describe when to refer a patient for additional rehabilitation services.
- Describe electro-optical devices available.
- Describe computer modifications, software and accessories available to patients with visual impairment.

4.3.5. Surgical Service - Clinical Learning Outcomes

Each intern will be able to accomplish the following, where appropriate, on a medical/surgical patient:

- Correctly interpret the
  - Ophthalmic Biometry
  - Computerized Corneal Topography
  - Optical Coherence Tomography (OCT)
- Glaucoma Screening
- Cataract Extraction Preoperative Evaluation
- Properly evaluate pre-surgical cataract patients utilizing specific tests and procedures to determine surgical eligibility.
- Properly evaluate post-surgical cataract patients utilizing specific tests and procedures to determine surgical eligibility for anterior capsular lysis and posterior capsulotomy.
- Properly evaluate pre-surgical trichiasis and chalazion patients utilizing specific tests and procedures to determine surgical eligibility.

- Properly evaluate pre-surgical refractive surgery patients utilizing specific tests and procedures to determine surgical eligibility.
- Properly evaluate and identify internal neoplasms of the eye and adnexa for removal.
- Properly evaluate glaucoma patients utilizing specific tests and procedures to determine the appropriate management of each patient.
- Properly evaluate all patients taking topical and/or oral medication and determining any deleterious health effects.
- Correctly recognize and evaluate anterior segment disease and utilize proper treatment and/or referral protocol.
- Correctly recognize and evaluate posterior segment disease and utilize proper treatment and/or referral protocol.
- Correctly recognize and evaluate ocular manifestations of systemic disease and utilize proper treatment and/or referral protocol.

4.3.6. Pediatric Care - Clinical Learning Outcomes

Each intern will be able to accomplish the following, where appropriate, on a pediatric patient:

- Acquire developmentally appropriate patient interactive skills.
- Obtain and record pertinent medical, ocular, and educational history from the parent and/or child.
- Obtain and record visual acuities using age-appropriate tests.
- Determine refractive status using age-appropriate methods.

- Evaluate the binocular, oculomotor, accommodative, and sensory system using age-appropriate methods.
- Evaluate the internal and internal health using age-appropriate tests.
- Develop skills in assessing special needs patients, infants, and children with learning problems.
- Diagnose and manage pediatric conditions such as:
    - Refractive conditions.
    - Strabismus.
    - Amblyopia.
    - Suppression.
    - Anomalous correspondence/eccentric fixation.
    - Nonstrabismic binocular anomalies.
    - Accommodative dysfunctions.
    - Oculomotor deficiencies.
    - Common pediatric ocular health anomalies.
    - Visual information processing dysfunction.

4.4. Internship Program Supervisor Responsibilities and Policies

4.4.1. Clinical Curriculum Development

- Advise the intern of expectations and requirements of the site, as well as the expectations for their clinical performance.
- Supervision and monitoring intern
- The supervisor and/or faculty must be present at all times for supervision and consultation during patient care activities.

4.4.2. Evaluation of the Intern

- Submission of mid and final intern evaluations
- Provide direct feedback to the intern as to technical, clinical and professional performance.
- Notify the Director of Internships within the first 3-5 weeks (or as appropriate) if the intern is failing or not meeting the expected standards of performance. Written and verbal feedback to the intern is important, as well as written and verbal notification to the Director of Internships. The Director will work in conjunction with the supervisor on an appropriate course of action. The intern will be advised of such determination.
- Being familiar with and adhering to established internship policies and procedures.
- Implementing appropriate requirements

4.4.3. Attendance, Professional Behavior, Clinical Responsibilities

- Reporting any significant deviations from expected standards by the intern which includes disciplinary action, deficiencies in performance, etc.
- Notify Office of Internship Programs if the intern is absent for an extended or significant amount of time. (Greater than 3 days). Intern must report absences with the Absence Form on the Al-Baha University /Intern site.
- Notify the Directory of Internships of a change in supervisors, submitting the new supervisor's curriculum vitae for review and approval of adjunct status.
- Notify the Director of Internships if any Clinical Instructor will be absent for a 2 week or more period of time. Qassim University retains the authority to temporarily relocate the intern or accept the Intern Site's plan for continued education.

4.4.4. Patient Logs.

To facilitate collection of clinical experience data, each intern is REQUIRED to keep a log of patients seen in the clinic. Use logbook to record the date, the site, supervisor's name, patient's gender, patient's age, type of examination, time with patient, diagnoses, and procedures. Even though gender, ethnicity and time with patient are not required fields, the students are expected to fill these areas in when the information is available. The intern may wish to keep a personal record or copy of their summary statistics logs for future reference. Students are required to keep the information up to date throughout the semester. Failure to comply with the requirement listed above will result in appropriate disciplinary action. Students will be required to make up any missed time in the clinic. A grade of "In-Progress" will be assigned to any intern who fails to comply with this requirement. Any student who fails to complete the patient logs within two weeks of the beginning of the next semester/rotation will receive "No Credit" for the previous semester/rotation. The Assistant Dean for Clinical Education will forward a recommendation to the Academic Review Committee of the college that the student repeat the clinical course during the summer semester/rotation. The Academic Review Committee will give due consideration to the recommendation of the Assistant Dean for Clinical Education, meet with the student and submit a recommendation to the Dean. The decision of the Dean will be final, subject only to direct appeal by the student to the Dean.